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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/695,360

10/28/2003

Anthony J. Bonfardecì

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09/20/2005

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EXAMINER

RODRIGUEZ, WILLIAM H

ART UNIT

PAPER NUMBER

3746

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,360

Applicant(s)

BONFARDECI ET AL.

Examiner

William H. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/29/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Specification

1. The specification is objected to because *in page 5 paragraph 0027 line 2 the sentence "of the present invention; and, " is incomplete.* Correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter (see 37 CFR 1.75(d)(1) and MPEP § 608.01(o)). *The specification does provide proper antecedent basis for the following limitations: electronic switching circuitry (for claims 1, 16 and 19); conformal coating (for claim 15); first material and second material (for claim 19). Appropriate correction is required.*

Claim Objections

2. Claim 12 is objected to because of the following informalities: *It is requested that the abbreviated terminology EM be spelled out (electromagnetic, electromagnet, electromotive, etc).*

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 13 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 13 recites the limitation "EMI" in line 1. There is insufficient antecedent basis for this limitation in the claim. *Further, it is requested that the abbreviated terminology EMI be spelled out.* Appropriate correction is required.

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Claim 1 recites the limitation “electronic switching circuitry” in line 3. Nevertheless, claim 16, which depends from claim 1, also recites the limitation “electronic switching circuitry” in line 2. It is unclear if applicant is claiming inadvertently a same limitation twice or if there are actually two separate and different “electronic switching circuitries”. Appropriate correction is required.

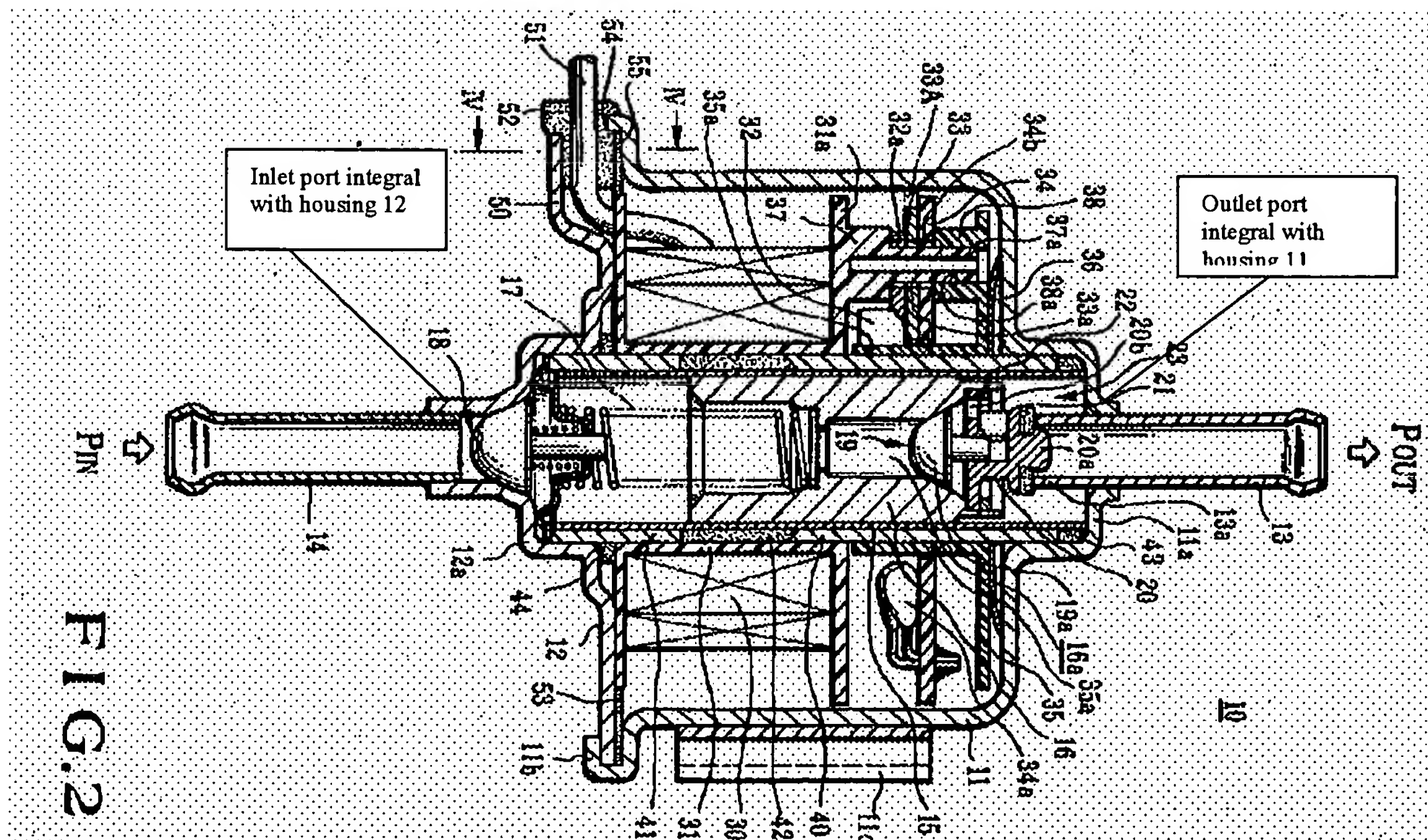
Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 8, 11, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaka et al. (US 4,643,653).



With respect to claim 1, **Masaka** teaches an electromagnetic fuel pump, comprising: a pump; electronic switching circuitry (column 6 lines 51-57) for controlling an electromagnetic coil 30 operatively arranged operate said pump; and, a housing (11, 12) arranged to house said pump and said coil, said housing comprising an integral (see column 3 lines 29-33) inlet port and outlet port. See particularly **Figure 2** above.

With respect to claim 2, **Masaka** teaches that the electromagnetic fuel pump further comprising a drive circuit (column 4 lines 22-24) housed within said housing, said drive circuit operatively arranged to drive said coil.

With respect to claim 3, **Masaka** teaches that the drive circuit further comprises a diode operatively arranged as a surge suppressor (column 4 line 29; column 6 lines 56-57).

With respect to claim 4, **Masaka** teaches that the housing further comprises at least one mounting flange 11c. See particularly **Figure 3**.

With respect to claim 5, where a product by process claim (in the instance case, a housing made by a molding process) is rejected over a prior art product (**Masaka's** housing) that appears to be identical as is the case here, although produced by a different process, the burden is upon the applicants to come forward with evidence establishing an unobvious difference between the two. See *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983).

With respect to claim 8, **Masaka** teaches that the inlet port further comprises a bore; wherein said bore is operatively arranged for adhesion to an inlet fuel hose coupling nipple 14. See particularly **Figure 2** above.

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With respect to claim 11, **Masaka** teaches that the outlet port further comprises a bore; wherein said bore is operatively arranged for adhesion to an outlet fuel hose coupling nipple 13. See particularly **Figure 2** above.

With respect to claim 16, **Masaka** teaches that the electronic switching circuitry is mounted on a printed circuit board 34 within said housing, and said electromagnetic coil 30 is mounted on a bobbin assembly 31 fixedly secured to said printed circuit board. See particularly figures 1, 2, 15; column 4 lines 28-31.

With respect to claim 17, **Masaka** teaches that the bobbin assembly 31 comprises a pair of opposing flanges 31a, and one of said flanges is fixedly secured to said printed circuit board 34. See particularly **Figure 1**.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Masaka et al. (US 4,643,653)**.

With regards to the word “integral” used in the claims rejected below, “the court has held that the use of a one piece construction instead of the structure disclosed in [prior art] would be merely a matter of obvious engineering choice”, which is not sufficient by itself to patentably

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distinguish the invention over an otherwise old device satisfying the structural limitations but comprised of several parts. See MPEP 2144.04 V.

With respect to claim 6, **Masaka** teaches that the inlet port further comprises a nipple 14, operatively arranged for coupling with an inlet fuel hose. **Masaka** does not teach that the inlet port is integral with the nipple 14. However, as stated by the court, the use of a one piece construction instead of the structure disclosed in **Masaka** would have been merely a matter of obvious engineering choice within the level of one of ordinary skilled in the art at the time the invention was made.

With respect to claim 9, **Masaka** teaches that the outlet port further comprises a nipple 13, operatively arranged for coupling with an outlet fuel hose. **Masaka** does not teach that the outlet port is integral with the nipple 13. However, as stated by the court, the use of a one piece construction instead of the structure disclosed in **Masaka** would have been merely a matter of obvious engineering choice within the level of one of ordinary skilled in the art at the time the invention was made.

10. Claims 7, 10 and 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Masaka et al. (US 4,643,653)** in view of **Masaka (US 4,306,842)**.

With respect to claims 7 and 10, **Masaka'653** teaches that the inlet port comprises an insert 14 and that the outlet port comprises an insert 13. **Masaka'653** does not teach that the inserts comprise threads. However, **Masaka'842** teaches an electromagnetic pump similar to **Masaka's 653**, wherein an insert inlet port 23 comprises threads in order to easily remove/replace said insert in case of failure or maintenance. Therefore, as taught by **Masaka'842**, it would have

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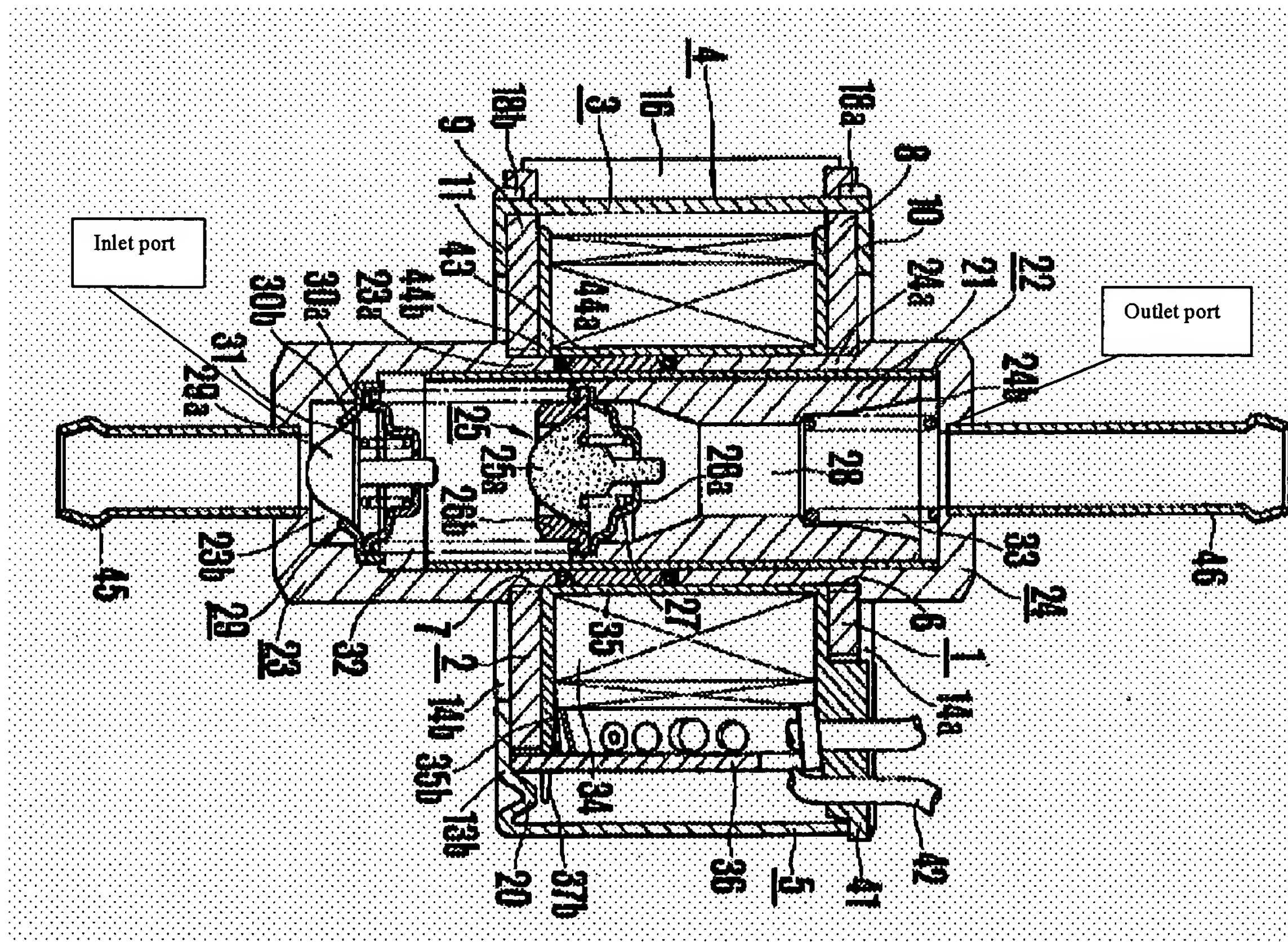
been obvious to one of ordinary skill in the art at the time the invention was made to have replaced **Masaka's 653** inserts by **Masaka's 842** inserts in order to easily remove/replace said inserts in case of failure or maintenance. See particularly Figure 2 of Maska'842.

With respect to claim 19, **Masaka'653** teaches an electromagnetic fuel pump, comprising: a pump; electronic switching circuitry (column 6 lines 51-57) for controlling an electromagnetic coil 30 operatively arranged to operate said pump; and, a two piece housing (11, 12) operatively arranged to house said pump and said coil, said two piece housing comprising a first material, wherein a first piece 11 of said two piece housing comprises an insert inlet port 14 and a second piece 12 of said two piece housing comprises an insert outlet port 13. **Masaka'653** does not teach that the insert inlet port and the insert outlet port comprise threads. However, **Masaka'842** teaches an electromagnetic pump similar to Masaka's 653, wherein an insert inlet port 23 comprises threads in order to easily remove/replace said insert in case of failure or maintenance. Therefore, as taught by **Masaka'842**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced **Masaka's 653** inserts by **Masaka's 842** inserts in order to easily remove/replace said inserts in case of failure or maintenance. See particularly Figure 2 of Maska'842. Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made Masaka's 653 inserts of a different material (i.e., plastic) than the housing in order to make the pump lighter (in case of a portable pump) and/or to reduce the cost of manufacturing the inserts and maintenance costs.

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11. Claims 1-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Masaka (US 4,306,842)**.

With regards to the word “integral” used in the claims rejected below, “the court has held that the use of a one piece construction instead of the structure disclosed in [prior art] would be merely a matter of obvious engineering choice”, which is not sufficient by itself to patentably distinguish the invention over an otherwise old device satisfying the structural limitations but comprised of several parts. See MPEP 2144.04 V.



With respect to claim 1, **Masaka** teaches an electromagnetic fuel pump, comprising: a pump; electronic switching circuitry (inherent in order to control the on/off sequence of the coil) for controlling an electromagnetic coil 34 operatively arranged operate said pump; and, a housing (1, 2, 3, 5) arranged to house said pump and said coil, said housing comprising an inlet port 7 and outlet port 6. See particularly **Figure 1** above. **Masaka** does not teach that the housing is a one piece housing “integral”. However, as stated by the court, the use of a one piece construction instead of the structure disclosed in Masaka would have been merely a matter of obvious engineering choice within the level of one of ordinary skilled in the art at the time the invention was made.

With respect to claim 2, **Masaka** teaches that the electromagnetic fuel pump further comprising a drive circuit 36 housed within said housing, said drive circuit operatively arranged to drive said coil. See particularly **Figure 2**.

With respect to claim 3, **Masaka** teaches that the drive circuit further comprises a diode operatively arranged as a surge suppressor (column 5 line 7).

With respect to claim 4, **Masaka** teaches that the housing further comprises at least one mounting flange 16, 17. See particularly **Figure 4**.

With respect to claim 5, where a product by process claim (in the instance case, a housing made by a molding process) is rejected over a prior art product (Masaka’s housing) that appears to be identical as is the case here, although produced by a different process, the burden is upon the applicants to come forward with evidence establishing an unobvious difference between the two. See *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983).

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With respect to claim 6, **Masaka** teaches that the inlet port further comprises a nipple 45, operatively arranged for coupling with an inlet fuel hose. **Masaka** does not teach that the inlet port 7 is integral with the nipple 45. However, as stated by the court, the use of a one piece construction instead of the structure disclosed in Masaka would have been merely a matter of obvious engineering choice within the level of one of ordinary skilled in the art at the time the invention was made.

With respect to claim 7, **Masaka** teaches that the inlet port 7 comprises a threaded insert 23. See particularly Figure 2 and column 3 lines 49-52.

With respect to claim 8, **Masaka** teaches that the inlet port further comprises a bore; wherein said bore is operatively arranged for adhesion to an inlet fuel hose coupling nipple 45. See particularly **Figure 1** above.

With respect to claim 9, **Masaka** teaches that the outlet port further comprises a nipple 46, operatively arranged for coupling with an outlet fuel hose. **Masaka** does not teach that the outlet port 6 is integral with the nipple 46. However, as stated by the court, the use of a one piece construction instead of the structure disclosed in Masaka would have been merely a matter of obvious engineering choice within the level of one of ordinary skilled in the art at the time the invention was made.

With respect to claim 10, **Masaka** teaches that the outlet port 6 comprises a threaded insert 24. See particularly Figure 2 and column 3 lines 49-52.

With respect to claim 11, **Masaka** teaches that the outlet port further comprises a bore; wherein said bore is operatively arranged for adhesion to an outlet fuel hose coupling nipple 46. See particularly **Figure 1** above.

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With respect to claim 12, **Masaka** teaches that the housing comprises structural hardening means (1, 2). See particularly **Figure 1** above.

With respect to claim 13, **Masaka** teaches that the structural hardening means comprises a metal shield (1, 2) within said housing. See particularly **Figure 1** above.

With respect to claim 14, **Masaka** teaches that the metal shield comprises a metal screen (1,2) within said housing. See particularly **Figure 1** above.

With respect to claim 16, **Masaka** teaches that the electronic switching circuitry is mounted on a printed circuit board (column 5 line 6) within said housing, and said electromagnetic coil 34 is mounted on a bobbin assembly 35 fixedly secured to said printed circuit board. See particularly **Figure 9**.

With respect to claim 17, **Masaka** teaches that the bobbin assembly 35 comprises a pair of opposing flanges 35a, and one of said flanges is fixedly secured to said printed circuit board. See particularly **Figure 9**.

With respect to claim 18, **Masaka** teaches that the one of the flanges 35a is fixedly secured to said printed circuit board and the other said flange is arranged to rest upon said printed circuit board. See particularly **Figures 1, 2**.

Allowable Subject Matter

12. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

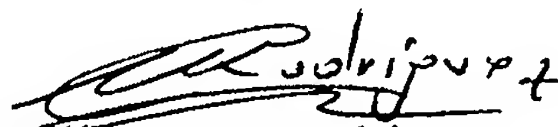
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Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 571-272-4831. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William H. Rodriguez 9/9/05
Examiner
Art Unit 3746